



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/838,320	04/19/2001	Peter B. Everdell	10.0815	1320
22474	7590	01/03/2006	EXAMINER	
DOUGHERTY CLEMENTS 1901 ROXBOROUGH ROAD SUITE 300 CHARLOTTE, NC 28211			COULTER, KENNETH R	
			ART UNIT	PAPER NUMBER
			2141	

DATE MAILED: 01/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/838,320	Applicant(s) EVERDELL ET AL.	
	Examiner Kenneth R. Coulter	Art Unit 2141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2005 (Amendment).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 16-20, 22-28, 30 and 32-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16-20, 22-28, 30 and 32-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

Examiner notes that Applicant has abandoned their argument that the present Application is a continuation-in-part of abandoned U.S. Patent Application 09/663,947 filed September 18, 2000.

Applicant should delete the appropriate claim of priority related to 09/663,947 from the specification of the present Application.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 – 14, 16 – 20, 22 – 28, 30, and 32 - 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Zadikian et al. (U.S. Pat. No. 6,724,757) (Configurable Network Router).

Art Unit: 2141

2.1 Regarding claim 1, Zadikian discloses a telecommunications network device, comprising:

a plurality of distributed processors (Fig. 3, items 350, 351; Figs. 7, 11);

a data path coupled to the plurality of distributed processors (col. 8, lines 40 – 47 “data path”); and

a switched control path independent from said data path coupled to the plurality of distributed processors, wherein separate control path resources are dedicated to each of the plurality of distributed processors (Figs. 2, 3; col. 8, lines 55 – 67; col. 11, lines 11 – 22 “control path 300”).

2.2 Per claim 2, Zadikian teaches the telecommunications network device of claim 1, wherein the switched control path is a first switched control path and further comprising:

a second switched control path coupled to the plurality of distributed processors (Fig. 3; col. 12, lines 30 – 41 “redundant control bus”; col. 18, lines 6 - 10).

2.3 Regarding claim 3, Zadikian discloses the telecommunications network device of claim 2, wherein the first and second switched control paths comprise redundant switched control paths (Fig. 3; col. 12, lines 30 – 41 “redundant control bus”; col. 18, lines 6 - 10).

2.4 Per claim 4, Zadikian teaches the telecommunications network device of

Art Unit: 2141

claim 1, wherein the switched control path comprises an Ethernet switch (col. 18, line 4 "Ethernet switches").

2.5 Regarding claim 5, Zadikian discloses the telecommunications network device of claim 4, wherein the Ethernet switch comprises: an Ethernet switch subsystem; and a plurality of physical Ethernet port chips coupled to the Ethernet switch subsystem, wherein each of the plurality of distributed processors is coupled with at least one of the plurality of physical Ethernet port chips (Fig. 3; col. 18, lines 5 - 10).

2.6 Per claim 6, Zadikian teaches the telecommunications network device of claim 5, wherein the plurality of physical Ethernet port chips is a first plurality of physical Ethernet port chips and the Ethernet switch subsystem comprises:

an Ethernet switch chip (Fig. 3; col. 18, lines 5 - 10); and

a second plurality of physical Ethernet port chips coupled with the Ethernet switch chip, wherein the second plurality of Ethernet port chips are further coupled with the first plurality of physical Ethernet port chips (Fig. 3; col. 8, lines 10 - 23).

2.7 Regarding claim 7, Zadikian discloses the telecommunications network device of claim 1, wherein the switched control path comprises a proprietary bus (col. 11, lines 24 - 44).

Art Unit: 2141

2.8 Per claim 8, Zadikian does not explicitly teach the telecommunications network device of claim 1, wherein the switched control path comprises an Asynchronous Transfer Mode network.

The Examiner hereby takes official notice that an ATM network is commonly used as a switched control path. Zadikian discloses a switched control path (Abstract; Fig. 3). Therefore it would have been inherent to implement an ATM network in Zadikian.

2.9 Regarding claim 9, Zadikian does not explicitly disclose the telecommunications network device of claim 1, wherein the switched control path comprises a Multi-Protocol Label Switching network.

The Examiner hereby takes official notice that an MPLS network is commonly used as a switched control path. Zadikian discloses a switched control path (Abstract; Fig. 3). Therefore it would have been inherent to implement a MPLS network in Zadikian.

2.10 Per claim 10, Zadikian teaches the telecommunications network device of claim 1, further comprising: a plurality of cards, wherein at least one of the plurality of processors is mounted on each of the plurality of cards (Fig. 3; col. 8, lines 10 - 23).

2.11 Regarding claim 11, Zadikian discloses the telecommunications network device of claim 1, wherein at least a portion of the plurality of distributed

Art Unit: 2141

processors are coupled to the switched control path through multiple independent ports (Fig. 3; col. 11, lines 32 - 44).

2.12 Per claim 12, Zadikian teaches the telecommunications network device of claim 1, further comprising: an external port coupled with the switched control plane (Abstract; Fig. 3).

2.13 Regarding claim 35, Zadikian discloses a telecommunications network device, comprising:

- a plurality of distributed processors (Fig. 3, items 350, 351; Figs. 7, 11);

- a data path coupled to the plurality of distributed processors (col. 8, lines 40 – 47 “data path”); and

- a switched control path independent from said data path coupled to the plurality of distributed processors, said switched control path providing a dedicated bandwidth to each distributed processor for transmission of control information (Figs. 2, 3; col. 8, lines 55 – 67; col. 7, lines 23 – 54 “desired quality of service (QOS)”);

- wherein each one of said distributed processors is coupled to the switched control path through multiple independent ports (Fig. 3; col. 11, lines 32 - 44);

- and wherein separate control path resources are dedicated to each of the plurality of distributed processors (Figs. 2, 3; col. 8, lines 55 - 67).

Art Unit: 2141

2.14 Regarding claims 13, 14, 16 – 20, 22 – 28, 30, and 32 - 34 the rejection of claims 1 – 12 and 35 under 35 USC 102(e) (paragraphs 2.1 – 2.13 above) applies fully.

3. Claims 1 – 3, 8, 10 – 12, 13, 17 – 20, 22, 23, 25, 30, and 33 - 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Christensen et al. (U.S. Pat. No. 6,591,374) (Method and Apparatus for Forcing System Components to Temporarily Enter a Standby Mode of Operation During Switching Events).

3.1 Regarding claim 1, Christensen discloses a telecommunications network device, comprising:

- a plurality of distributed processors (Figs. 2, items 210, 211, 212);

- a data path coupled to the plurality of distributed processors (Abstract; Fig. 1); and

- a switched control path independent from said data path coupled to the plurality of distributed processors, wherein separate control path resources are dedicated to each of the plurality of distributed processors (Abstract; Figs. 2, 6; Fig. 4, “control bus” interfaces to port cards).

3.2 Per claim 2, Christensen teaches the telecommunications network device of claim 1, wherein the switched control path is a first switched control path and further comprising:

Art Unit: 2141

a second switched control path coupled to the plurality of distributed processors (Fig. 6).

3.3 Regarding claim 3, Christensen discloses the telecommunications network device of claim 2, wherein the first and second switched control paths comprise redundant switched control paths (Fig. 6 "REDUNDANT CONTROL BUS 333"; Abstract; col. 4, lines 51 - 55).

3.4 Per claim 8, Christensen teaches that the switched control path comprises an Asynchronous Transfer Mode (ATM) network (col. 4, lines 15 - 29).

3.5 Regarding claim 10, Christensen discloses a plurality of cards, wherein at least one of the plurality of processors is mounted on each of the plurality of cards (Figs. 2, 4).

3.6 Per claim 11, Christensen teaches that at least a portion of the plurality of distributed processors are coupled to the switched control path through multiple independent ports (Figs. 2, 4).

3.7 Regarding claim 12, Christensen discloses an external port coupled with the switched control plane (Abstract; Figs. 2, 4).

Art Unit: 2141

3.8 Regarding claim 35, Christensen discloses a telecommunications network device, comprising:

a plurality of distributed processors (Fig. 2, items 210, 211, 212; Abstract);

a data path coupled to the plurality of distributed processors (Abstract; Fig.

1); and

a switched control path independent from said data path coupled to the plurality of distributed processors, said switched control path providing a *dedicated bandwidth* to each distributed processor for transmission of control information (Abstract; Figs. 2, 6; col. 4, lines 41 – 49),

wherein each one of said distributed processors is coupled to the switched control path through multiple independent ports (Fig. 4);

and wherein separate control path resources are dedicated to each of the plurality of distributed processors (Fig. 4, “control bus” interfaces to port cards).

3.9 Per claims 13, 17 – 20, 22, 23, 25, 30, 33, and 34, the rejection of claims 1 – 3, 8, 10 – 12 and 35 under 35 USC 102(e) (paragraph 3.1 – 3.8 above) applies fully.

4. Claims 1 – 14, 16 – 20, 22 – 28, 30, and 32 – 34 are rejected under 35 U.S.C. 102(e) as being disclosed by Ferguson et al. (U.S. Pat. Pub. No. 2002/0059424) (Flow Scheduling for Network Application Apparatus).

Art Unit: 2141

4.1 Regarding claim 1, Ferguson discloses a telecommunications network device, comprising:

a plurality of distributed processors (Abstract; Figs. 2, 4);

a data path coupled to the plurality of distributed processors (Abstract; Figs. 2, 4); and

a switched control path independent from said data path coupled to the plurality of distributed processors, wherein separate control path resources are dedicated to each of the plurality of distributed processors (Abstract; Figs. 2, 4, 8, 9; paragraph 5, 66, and 72).

4.2 Per claim 2, Ferguson teaches the telecommunications network device of claim 1, wherein the switched control path is a first switched control path and further comprising:

a second switched control path coupled to the plurality of distributed processors (Fig. 4).

4.3 Regarding claim 3, Ferguson discloses the telecommunications network device of claim 2, wherein the first and second switched control paths comprise redundant switched control paths (p. 5, paragraph 45).

4.4 Per claim 4, Ferguson teaches the telecommunications network device of claim 1, wherein the switched control path comprises an Ethernet switch (p. 5,

Art Unit: 2141

paragraph 45; p. 8, paragraph 72).

4.5 Regarding claim 5, Ferguson discloses the telecommunications network device of claim 4, wherein the Ethernet switch comprises: an Ethernet switch subsystem; and a plurality of physical Ethernet port chips coupled to the Ethernet switch subsystem, wherein each of the plurality of distributed processors is coupled with at least one of the plurality of physical Ethernet port chips (p. 5, paragraph 45; p. 8, paragraph 72).

4.6 Per claim 6, Ferguson teaches the telecommunications network device of claim 5, wherein the plurality of physical Ethernet port chips is a first plurality of physical Ethernet port chips and the Ethernet switch subsystem comprises:

- an Ethernet switch chip (p. 5, paragraph 45; p. 8, paragraph 72); and
- a second plurality of physical Ethernet port chips coupled with the Ethernet switch chip, wherein the second plurality of Ethernet port chips are further coupled with the first plurality of physical Ethernet port chips (Fig. 4; p. 5, paragraph 45; p. 8, paragraph 72).

4.7 Regarding claim 7, Ferguson discloses the telecommunications network device of claim 1, wherein the switched control path comprises a proprietary bus (Fig. 4; p. 5, paragraph 45; p. 8, paragraph 72).

4.8 Per claim 8, Ferguson teaches the telecommunications network device of

Art Unit: 2141

claim 1, wherein the switched control path comprises an Asynchronous Transfer Mode network (Fig. 6C; pp. 4-5, paragraph 52).

4.9 Regarding claim 9, Ferguson does not explicitly disclose the telecommunications network device of claim 1, wherein the switched control path comprises a Multi-Protocol Label Switching network.

The Examiner hereby takes official notice that an MPLS network is commonly used as a switched control path. Ferguson discloses a switched control path (Fig. 4; p. 5, paragraph 45; p. 8, paragraph 72). Therefore it would have been inherent to implement a MPLS network in Ferguson.

4.10 Per claim 10, Ferguson teaches the telecommunications network device of claim 1, further comprising: a plurality of cards, wherein at least one of the plurality of processors is mounted on each of the plurality of cards (Fig. 4; p. 5, paragraph 45; p. 8, paragraph 72).

4.11 Regarding claim 11, Ferguson discloses the telecommunications network device of claim 1, wherein at least a portion of the plurality of distributed processors are coupled to the switched control path through multiple independent ports (Fig. 4; p. 5, paragraph 45; p. 8, paragraph 72).

4.12 Per claim 12, Ferguson teaches the telecommunications network device of

Art Unit: 2141

claim 1, further comprising: an external port coupled with the switched control plane (Fig. 4; p. 5, paragraph 45; p. 8, paragraph 72).

4.13 Regarding claims 13, 14, 16 – 20, 22 – 28, 30, and 32 - 34, the rejection of claims 1 – 12 under 35 USC 102(e) (paragraphs 4.1 – 4.12 above) applies fully.

Response to Arguments

5. Applicant's arguments filed 9/19/05 have been fully considered but they are not persuasive.

Applicant argues that Zadikian (U.S. Pat. No. 6,724,757) does not disclose “a telecommunications network device wherein the control path is independent from the data path, and wherein separate control path resources are dedicated to each of the plurality of distributed processors.” (p. 9 bottom paragraph of arguments).

Examiner disagrees.

Zadikian clearly discloses separate data buses and control buses (Figs. 2, 3; col. 8, lines 55 - 67) and separate control path resources dedicated to each distributed processor (Figs. 2, 3; col. 8, lines 55 - 67).

Applicant argues that Christensen (U.S. Pat. No. 6,591,374) does not disclose “a telecommunications network device wherein the control path is independent from

Art Unit: 2141

the data path, and wherein separate control path resources are dedicated to each of the plurality of distributed processors.” (p. 10 bottom paragraph of arguments).

Examiner disagrees.

Christensen clearly discloses separate data buses and control buses (Figs. 4, 5, 6) and separate control path resources dedicated to each distributed processor (Fig. 4, “control bus” interfaces to port cards).

Applicant argues that Ferguson (U.S. Pat. Pub. No. 2002/0059424) does not disclose “a telecommunications network device wherein the control path is independent from the data path, and wherein separate control path resources are dedicated to each of the plurality of distributed processors.” (p. 11 of arguments).

Examiner disagrees.

Ferguson clearly discloses separate data buses and control buses (Figs. 2, 4, 8, 9) and separate control path resources dedicated to each distributed processor (Figs. 2, 4, 8, 9; paragraphs 66, 72).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is

Art Unit: 2141

filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth R. Coulter whose telephone number is 571 272-3879. The examiner can normally be reached on 5 4 9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharra can be reached on 571 272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2141

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FOR OFFICIAL USE ONLY
Kenneth L. Lunde

krc